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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,810	08/05/2002	Lutz Brandt	FA-1068	3040

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EXAMINER

TSOY, ELENA

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 03/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/089,810	BRANDT ET AL.	
	Examiner	Art Unit	
	Elena Tsoy	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10,11,13,14 and 16-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10,11,13,14 and 16-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

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Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 25, 2005 has been entered.

Response to Amendment

2. Amendment filed on February 25, 2005 has been entered. Claims 12 and 15 have been cancelled. Claims 10-11, 13-14, 16-24 are pending in the application.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 10, 11, 13, 14, 16-22 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Betz et al (US 6,261,645) and Bishop et al (US 4,609,718, which corresponds to EP 204161).

Betz et al disclose a process for producing scratch resistant (See column 2, lines 61-67; column 3, lines 1-8) multicoat finishes in which a pigmented basecoat applied to the substrate surface, a clear topcoat coating composition comprising **two** or more radiation curable binders (See column 3, lines 1-4; column 5, lines 42-54) based on prepolymers or oligomers such as urethane acrylates (methacrylates) (See column 5, lines 47-54, 62, 64) is applied atop the resultant basecoat film, and then the topcoat film is cured (See column 9, lines 33-36, 57-67) by means of radiation, preferably by means of UV radiation (See column 10, lines 6-10). Aliphatic urethane acrylates (methacrylates) are particularly preferred binders (See column 6, lines 2-5). The binders can be used in the coating composition in an amount 5-90 wt % (See column 8, lines 14-21). The coating composition may if desired include one or more reactive diluents, which are employed preferably in an amount of from 0 to 70% by weight, with particular preference from 15 to 65% by weight, based in each case on the overall weight of the coating composition in the case of clear coats (See column 8, lines 22-34). The coating composition is particularly suitable as a topcoat for producing a multicoat finish in the sector of the automotive OEM finishing and/or automotive refinishing (i.e. over outer finish) of car bodies and parts thereof and also truck bodies, and the like (See column 10, lines 1-5). The prepolymers or oligomers normally have a number-average molecular weight of from 500 to 50,000, preferably from 1000 to 5000 and preferably have at least 2 and, with particular preference, from 3 to 6 double bonds per molecule, i.e. **3-6** of *methacryloyl* functionalities (which cover **claimed range of 3-4.5**) and preferably also have a double bond equivalent weight of from 400 to 2000, with particular preference from 500 to 900 (See column 6,

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lines 12-23). Therefore, Betz expressly teaches urethane (meth)acrylates having from 3 to 6 double bonds per molecule and having a number-average molecular weight of from 500 to 50,000, preferably from 1000 to 5000.

Betz et al teach that the urethane (meth)acrylates are well known in the art and can be made by reacting (any) di- or polyisocyanate, e.g commercially customary **isocyanurate** trimer of hexamethylene (hexane) diisocyanate (claimed polyisocyanate based on an acyclic aliphatic diisocyanate having 8 C atoms) (See column 13, lines 15-20) with hydroxyalkyl methacrylate and diols/polyols (See column 7, lines 14-54). Betz et al teach that **these various preparation processes** for the polyurethane acrylates **are known (cf. e.g. EP-A-204 161)** and therefore do not require any more detailed description (See column 7, lines 52-54). Bishop et al (which corresponds to EP 204161) teach that **any organic diisocyanate** can be used to form the acrylate-terminated oligomers, such as a diisocyanate in which a linear aliphatic chain containing at least 6 carbon atoms separates the two isocyanate groups (i.e. including an acyclic aliphatic diisocyanate having 8 C atoms) (See column 3, lines 65+).

Therefore, even if it could be argued that isocyanurate trimer of hexamethylene diisocyanate is expressly taught by Betz et al only in Comparative example 3, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used commercially customary isocyanurate trimer of hexamethylene diisocyanate as polyisocyanate for preparing urethane (meth)acrylates in Betz et al since Bishop et al (which corresponds to EP 204161) teach that any organic diisocyanate can be used to form the acrylate-terminated oligomers, and Betz et al do not put any limitation to suitable polyisocyanates.

6. Claims 23, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Betz et al (US 6,261,645) and Bishop et al (US 4,609,718, which corresponds to EP 204161).

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Betz et al are applied here for the same reasons as above. Betz et al further teach that the coating composition is scratch resistant (See column 2, lines 61-67; column 3, lines 1-8) and is particularly suitable as a topcoat for producing a multicoat finish in the sector of the automotive OEM finishing and/or automotive refinishing (i.e. over outer finish) of car bodies and parts thereof and also truck bodies, and the like (See column 10, lines 1-5).

Betz et al fail to teach that the clear topcoat is applied to areas of outer finish susceptible to scratching (Claim 23) such as near locks, door handles, etc. (Claim 24).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied a coating composition of Betz et al to areas of outer finish susceptible to scratching such as near locks, door handles, etc. with the expectation of providing the desired scratch resistance, since Betz et al teach that the coating composition is scratch resistant and is particularly suitable as a topcoat for producing a multicoat finish in the sector of the automotive OEM finishing and/or automotive refinishing (i.e. over outer finish) of car bodies and parts thereof and also truck bodies, and the like.

Response to Arguments

6. Applicants' arguments filed February 25, 2005 have been fully considered but they are not persuasive.

(A) Applicants argue that Betz et al never mention Applicants' specifically defined process for preparing specific aliphatic urethane (methlacrylates utilized for preparing UV curable clear/sealing coatings having outstanding flexibility and scratch resistance since clear lacquers taught by Betz et al have "a relatively high content of low or non-volatile high reactive thinners which, after application of the clear lacquers, can lead to an undesirable partial dissolution

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of the base lacquer coats resulting in deviations in colour or effect. Moreover, high amounts of reactive diluents results in a less flexible radiation cured coating due to high cross-linking density.

Firstly, Betz et al do teach outstanding flexibility and scratch resistance (See column 10, lines 28-30) or it would be *inherent*. Secondly, the features upon which applicant relies (i.e., outstanding flexibility and scratch resistance) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Thirdly, Betz et al teach that reactive diluents are employed preferably in an amount of from 0 to 70% by weight (See column 8, lines 22-34) which covers claimed range of 0-10 wt %.

(B) Applicants argue that neither Betz, nor the disclosures of Bishop relied upon by Betz, disclose or suggest any aliphatic urethane (methacrylate having an average methacryloyl functionality of 3 to 4.5 and a calculated molecular mass of at least 826, or any process parameters for forming any aliphatic urethane (methacrylate having the recited characteristics.

The Examiner respectfully disagrees with this argument. Betz teaches that examples of binders employed in the radiation-curable coating composition are binders having methacryloyl functionalities (See column 5, lines 58-67), preferably urethane methacrylates and/or polyester methacrylates, the use of aliphatic urethane acrylates being particularly preferred (See column 6, lines 2-4). The polymers or oligomers employed as binders normally have a number-average molecular weight of from 500 to 50,000, preferably from 1000 to 5000 (See column 6, lines 12-15). The polymers and/or oligomers employed in the coating compositions of the invention preferably have at least 2 and, with particular preference, from 3-6 double bonds per molecule, i.e. 3-6 of *methacryloyl* functionalities which cover **claimed range of 3-4.5** (See column 6, lines 15-18). The binders used preferably also have a double bond

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equivalent weight of from 400 to 2000, with particular preference from 500 to 900 (See column 6, lines 18-20). Therefore, Betz expressly teaches urethane (meth)acrylates having from 3 to 6 double bonds per molecule and having a number-average molecular weight of from 500 to 50,000, preferably from 1000 to 5000.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is (571) 272-1429. The examiner can normally be reached on Mo-Thur. 9:00-7:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-141523. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ELENA TSOY
PRIMARY EXAMINER
E. Tsoy

Elena Tsoy
Primary Examiner
Art Unit 1762

March 17, 2005